REMARKS/DISCUSSION OF ISSUES

Claims 1-11 are pending in the application. Claims 1-11 are rejected.

Claims 1, 2 and 4-11 are rejected under 35 USC 102(b) as being anticipated by Nogami et al. (U.S. patent 5,700,391) (herein 'Nogami').

Nogami discloses a liquid coating composition for use as an insulating film in a liquid crystal display. The coating composition comprises:

(a) a solution obtained by hydrolyzing a tetraalkoxysilane in an organic solvent in the presence of an alkaline catalyst, the solution containing particles having a particle size of from 10 nm to 80 nm;

(b) a hydrolyzed product, formed in the presence of an acid catalyst, of an alkoxysilane and/or a tetraalkoxy titanium;

(c) an aluminum salt; and

(d) a deposition inhibitor.

See, e.g., claim 1 of Nogami.

As explained, e.g., at col. 4, lines 21 et seq., the silica particles are formed in situ as a product of the hydrolysis of solution (a). Moreover, solution (a) contains only an organosilane, not a metal alkoxide. Solution (b) may contain a metal alkoxide, but in the presence of an acid catalyst, not a basic catalyst.

In contrast, Applicant's claim 1 calls for adding silica particles to a reaction mixture, not forming the silica particles in situ as a product of hydrolysis. Moreover,

Applicant's claim 1 calls for the reaction mixture to comprise an organosilane compound and a metal alkoxide under basic conditions.

The Examiner has referred to the combination of solution (A) of Example 1 with solution (L) of Example 12 as having been basic, since no acid was added. However, Example 12 states that aluminum nitrate hydrate was added to solution (L) (col. 10, lines 6 and 7). Aluminum nitrate is known to be acidic in solution. See, e.g., Malinckrodt Baker Inc.'s data sheet for the chemical at http://www.jtbaker.com/msds/englishhtml/a2832.htm.

Since Nogami does not teach or suggest Applicant's claimed method step, Nogami does not anticipate Applicant's claims 1, 2 and 4-11, and the rejection is in error and should be withdrawn.

Claims 4 and 5 are rejected under 35 USC 103(a) as being unpatentable over Nogami, citing col. 3, lines 8-22, wherein it is disclosed that R^1 in formula (2) for an alkoxysilane may be the 3-glycidoxyproply group (line 18).

Without conceding the patentability per se of claim 4, it is pointed out that claim 4 is patentable by virtue of its dependency on claim 1, which is patentable for reasons set forth elsewhere in this response.

With respect to claim 5, Nogami fails to teach or suggest a formula in which the 3-glycidyloxypropyl group is connected to the oxysilane via methyl groups, specifically three methyl groups, as claimed.

The Examiner has argued that: (1) Nogami's disclosed formula (2) where R1 is 3-glycidyloxypropyl would be an 'obvious functional equivalent' of 3-glycidyloxypropyltrimethoxysilane; (2) 3-

glycidyloxypropyltrimethoxysilane was a 'clearly contemplated species' of formula (2) where R1 is 3-glycidyloxypropyl; and (3) that it would have been obvious to employ 3-glycidyloxypropyltrimethoxysilane for its known coupling or adhesive properties in forming his coatings.

However, the Examiner has provided no reference or other evidence to support these claims. On the contrary, 3-glycidyloxypropyltrimethoxysilane was obviously not contemplated by Nogami, since it was neither taught nor suggested by Nogami. It follows that Nogami did not recognize any known coupling or adhesive properties of 3-glycidyloxypropyltrimethoxysilane.

The only way that use such a compound would have been obvious to the skilled artisan would have been with the aid of hindsight from Applicant's own teachings, and such hindsight is not permitted in judging obviousness under section 103.

Accordingly, the rejection is in error and should be withdrawn.

Claims 1-11 are rejected under 35 USC 103(a) as being unpatentable over previously cited JSR, taken with Nogami.

JSR teaches a photocatalyst coating film and a method of making coating layers containing a photocatalyst. The method includes the steps of forming: an undercoating of a coating composition composed mainly of an organosilane component (a) and a polymer component (b) having a silyl group; and an overcoating of an organosilane component (a), a photocatalyst (f) for the hydrolysis and condensation of organosilane components (a) and, if desired, a polymer component (b) having a silyl group.

JSR teaches that the component (f) is preferably selected from acidic compounds, alkali compounds, basic compounds, amine compounds and organic metallic compounds. See para. [0152].

Component (f) may also be provided as a combination of two or more substances. See para. [0162].

The organic metallic compounds include metal alkoxides.

The Examiner urges that JSR thus teaches the use of a metal alkoxide in combination with another compound which would have resulted in basic conditions.

However, JSR does not teach that a metal alkoxides should be used in conjunction with any specific one of the other listed compounds, and certainly not a particular compound which would result in basic conditions.

JSR includes both acidic and basic compounds, as well as other compounds in the list, and provides no guidance as to the selection of any one or more of these compounds over the others. Thus, one skilled in the art could just as readily select an acidic compound as a basic compound, which would be in direct conflict with Applicant's teachings and claims, which call for basic conditions.

Alternatively, one could use both acidic and basic compounds, which would result in neutral conditions, not basic conditions.

In summary, JSR simply provides a list of specific catalysts from which to chose, one of which happens to be a metal alkoxide, and the others include acidic compounds as well as basic compounds. There is absolutely no teaching or suggestion that a metal alkoxide be used under basic conditions.

Thus, it would not have been obvious to one skilled in the art to select a metal alkoxide in combination with a basic compound, or a compound capable of producing basic conditions.

As already set forth herein, Nogami teaches the use of a basic catalyst for the hydrolysis of tetraalkoxysilane, but teaches the use of an acidic catalyst for the hydrolysis of an alkoxysilane and/or a tetraalkoxy titanium. Thus, Nogami's teachings are in direct conflict with Applicant's teachings, and thus lead the skilled artisan away from Applicant's claimed invention.

The Examiner has deemed Applicant's arguments with respect to JSR unpersuasive, since all disclosures in a reference must be considered for what they teach, not just preferred embodiments or specific examples.

However, it is the Examiner who is cherry-picking the reference for arguments favorable to his position. Thus, the Examiner argues that basic conditions are taught, even though elsewhere in the reference, acidic conditions are taught. When the entire teachings of JSR are fairly considered, it must be concluded that JSR has no preference for either acidic or basic conditions. Thus, the skilled artisan is not led to one or the other. One must look outside the four corners of JSR for guidance in this respect. Looking to Nogami results in further conflicting teachings regarding acidic and basic conditions.

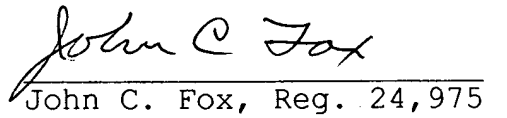
These conflicting teachings, rather than suggesting Applicant's invention, actually teach away from, and thus support the non-obviousness of Applicant's claims.

Accordingly, the rejection is in error and should be withdrawn.

In view of the foregoing arguments, Applicant urges that all of the pending claims are allowable, and respectfully

requests that the Examiner withdraw all of the rejections of record, allow all the pending claims, and find the application to be in condition for allowance.

Respectfully submitted,



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